

GRINMAN Isaak Grigor'yevich. Prinimali uchastiye: SAKBAYEV, Zh.M.;
BLYAKH, G.I.; SHAGI-SULTAN, I.Z.; SIRAZUTDINOVA, Zh.A.;
SHTEYN, N.S.; YERMAGAMHETOV, S.B.; KOZLOV, G.S.[deceased];
IVANOV, L.G.; OSHCHENSKIY, V.M.; DZHASYBEKOVA, E.K.;
NURGALIYEVA, Kh. PRESNYAKOV, A.A., doktor tekhn. nauk,
otv. red.; ALEKSANDRIYSKIY, V.V., red.

[Automation of nonferrous metal ore dressing processes]
Avtomatizatsiya protsessov obogashcheniya rud tsvetnykh me-
tallov. Alma-Ata, Izd-vo AN Kaz.SSR, 1964. 213 p.

(MIRA 17:10)

1. Laboratoriya elektroniki i avtomatiki Instituta yadernoy
fiziki AN Kaz.SSR (for all except Grinman, Presnyakov,
Aleksandriyskiy).

ALEKSANDROV, A., kand. tekhn. nauk; GAKH, B., inzh.

System of traction sectors used in automotive transport. Avt. transp.
36 no.2:6-8 F '58. (MIRA 11:2)

(Transportation, Automotive)

ALEKSANDROV, A.

O nekotorykh voprosakh organizatsii raboty avtomobil'nogo transporta. [On certain questions of organization of the automotive transportation]. (Avtomobil', 1950, no. 3, p. 6-9, diagrs.) DLC: TL4.A87

SO: Soviet Transportation and Communication, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

ALEKSANDROV, A., kandidat tekhnicheskikh nauk

Tasks in the development of automotive transport in the regions
reclaiming new and idle lands. Avt.transp.33 no.8:7-9 Ag '55.
(MIRA 8:12)

1. Kompleksnaya transportnaya ekspeditsiya Soveta po izucheniyu
proizvoditel'nykh sil Akademii nauk SSSR
(Kazakhstan--Transportation, Automotive)

ALEKSANDROV, A., kandidat tekhnicheskikh nauk.

Over-all study of operational and technical characteristics
of roads and automobiles. Avt.transp. 35 no.7:5-9 J1 '57.
(ILRA 10:8)

1. Institut kompleksnykh transportnykh problem Akademii nauk
SSSR.

(Transportation, Automotive)

ALEKSANDRO, A.

"Laik," a sterilizing filter. Okhr. truda i sots. strakh.
5 no.5:34 My '62. (MIRA 15:5)
(Filters and filtration)

USSR/Cultivated Plants. Technical Plants. Oil and H
Sugar Bearing Plants.

Abs Jour : Ref Zhur-Biol., No 15, 1958, 68257

Author : Aleksandrov, A.

Inst :

Title : Cotton Selection and Seed Cultivation in the
Chinese People's Republic.

Orig Pub : Khlopkovodstvo, 1957, No 1, 56-61

Abstract : Formerly, the small-seedcase Asiatic cotton,
Gossipium herbaceum L., was cultivated in
China. Subsequently, it was replaced by G.
arboreum L. varieties, which have a short
and coarse fiber. In 1919, selection work
with cotton was begun. In 1956, the relative
proportion of sowings planted with selected

Card : 1/3

USSR/Cultivated Plants. Technical Plants, Oil and M
Sugar Bearing Plants.

Abs Jour : Ref Zhur-Biol., No 15, 1958, 68257

with thiamine, supplementary application of
pollen of the maternal variety, etc.). Variety
testing has been organized. In 1956, 22 Soviet
varieties were tested. -- N. N. Konstantinov

Card : 3/3

ALEKSANDROV, A.; FENEV, T.

For cheap granaries on cooperative farms. p. 30.
(Kooperativno Zemedelie, Vol. (12) no. 5, May 1957. Sofia, Bulgaria)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no 10, October 1957. Uncl.

ALEKSANDROV, A.

Regulations on weight and size limits for motor vehicles.
Avt. transp. 36 no.10:22-26 U '58. (MIRA 13:1)

1. Institut kompleksnykh transportnykh problem AN SSSR.
(Transportation, Automotive--laws and regulations)

ALKSANDROV, A.

"The Development of Science in the Rumanian National Republic," Zhurnal Obshchiy Khimii (Journal of General Chemistry), of the AS USSR, Tom 20, 1950.

ALEKSANDROV, A.

27-12-6/27

AUTHOR: Aleksandrov, A., Methodologist of the Sverdlovsk Oblast' Methodical Section

TITLE: The Introduction of Advanced Experience (Vnedreniye peredovogo opyta)

PERIODICAL: Professional'no - Tekhnicheskoye. Obrazovaniye, 1957, # 12, p 6-8 (USSR)

ABSTRACT: The author points out that the Methodical Section at Sverdlovsk during a number of years has paid much attention to the dissemination of advanced experience in training and educational work. The author deals in detail with the various stages of dissemination and then describes a number of cases initiated by the instructors or foremen and regarded as a foremost method of instruction. One of the first mentioned is that of instructor Mal'tsev of the Trade School # 5 at Serov who organized practical house lessons in electrical engineering with the use of devices, models and other visual aids made by the students. Another example is that of instructor Raytsin of the Trade School # 9 at Chelyabinsk, who constructed a stand for solving problems and practical lessons in electrical engineering. A

Card 1/2

The Introduction of Advanced Experience

27-12-6/27

sketch of the stand was forwarded to all the trade and technical schools of the Oblast'. The independent manufacture of various objects by the students, as practiced by many schools of the Oblast', is of great instructional and educational importance. The author recommends that attention be given to the experiment of foreman Korochkin of Trade School # 47 at Seversk, who with his apprentice group took over the attendance at an open hearth furnace at the metallurgical plant, the school's basic enterprise. The workers of the Methodical Section are convinced that not all the possibilities have been used in this field, and that new ways to expand the work should be sought.

ASSOCIATION: The Oblast' Methodical Section, Sverdlovsk (Sverdlovskiy oblastnoy metodicheskiy kabinet)

AVAILABLE: Library of Congress

Card 2/2

ALEKSANDROV, A. (Leningrad)

Problems in profitable production and the distribution of
profit of industrial enterprises. Vop.ekon. no.9:156-158
S '61. (MIRA 14:8)

(Profit)

ALEKSANDROV, A. (Col.)

AID - P-32

Subject : USSR/Aeronautics

Card : 1/1

Authors : Aleksandrov, A., Col., and Stepanov, A., Col.

Title : The Air Force of the Fatherland

Periodical : Vest. vozd. flota, 2, 65 - 75, February 1954

Abstract : This is a short historical review of the development of the Russian Fighter Air Force. Several statistical tables and graphs of a general character appear in the text.

Institution : None

Submitted : No date

ALEKSANDROV, A.

RKU-2 apparatus for repairing and checking equipment.

Voen.znan. 36 no.11:33 N'60.

(MIRA 13:11)

(Diving, Submarine--Equipment and supplies)

ALEKSANDROV, A.

107-57-5-5/63

AUTHOR: Aleksandrov, A., Chief of a laboratory

TITLE: New Great Tasks (Novyye bol'shiye zadachi)

PERIODICAL: Radio, 1957, Nr 5, p 7 (USSR)

ABSTRACT: The fundamental reorganization of management of industry and construction as mapped out by N.S. Khrushchev is a necessary step welcomed by all industry workers. The Ministry of Radio-Engineering Industry can serve as an example. Its two Main Administrations have had control over the electro-vacuum industry which has often resulted in confusion. Mutual ties between research institutes and factories have been poorly organized; newly developed models have gone into production very slowly. Supply of industrial enterprises with measuring instruments and equipment has been inadequate. "Up to this time our laboratory has no experimental glass shop which seriously deters new developments".

ASSOCIATION: The Ministry of Radio-Engineering Industry

AVAILABLE: Library of Congress

Card 1/1

VASILEVA-ALEKSANDROVA, P.; ALEKSANDROV, A.

Microcrystallescopic identification of mercury(Hg) (I) ions in media of picrolonic acid. Doklady BAN 14 no.6:595-598 '61.

1. Note presented par D. Ivanov, membre de l'Academie bulgare des Sciences.

ALEKSANDROV, A.

Green light for the production of bessemer steel. Metallurg
7 no.5:2 of paper My '62. (MIRA 15:5)
(Bessemer process)

ALEKSANDROV, A.

21 (2) PHASE I BOOK EXPLOITATION 307/2708

Atomovskiy, I. I. (ed.) *Atomik Energy and the Navy* (Collection of Articles) Moscow, Voenizdat, 1959. 232 p. (Series: Nauchno-populyarnaya biblioteka) Number of copies printed not given.

Ed.: Dr. M. M. Kozlov, Ed.: A.M. Gavrilov; Ed. and Compiler: L. D. Chernomir, Engineer, Captain.

PURPOSE: This book is intended for the general reader.

CONTENT: The papers in this collection discuss in popular style, and on the basis of data published in the Soviet and non-Soviet press, problems of the use of atomic and hydrogen weapons in combat operations at sea. The collection includes reports on the damaging factors of a nuclear explosion and on the defense power of this weapon of mass destruction. A number of articles are devoted to the antinuclear defense of ships and of shore objects, and to the introduction of nuclear power plants in naval vessels. Also included in the collection are papers dealing with the future prospects for naval nuclear energy, and with the construction of the world's first nuclear submarine, the "Lening", which is expected to play an important part in the further conquest of the Arctic regions. The collection also contains papers published in the journal *Sovetskii flot* in 1953 - 1959, in revised and supplemented form.

Author: L. D. Chernomir, Engineer, Captain. Penetrating Radiation

Aleksandrov, A., Engineer Lieutenant Colonel, and G. Kozlov, Engineer Captain. "Atom Bomb and Its Shock Effect"	53
Kozlov, I., Engineer Commander. "Radioactive Contamination of a Ship"	58
Aleksandrov, A., Captain, and V. Vladimirov, Engineer Captain. "Antinuclear Defense of a Ship"	66
Kirichenko, G., Professor, Doctor of Technical Sciences, Engineer Captain. "Defense of Ships Against Explosions"	75
Abolikhin, P., Captain. "Means of Antinuclear Protection of Ships of Foreign Navies"	82
Koblov, P., Candidate of Technical Sciences, Engineer Commander. "Antinuclear Defense of Light Ships"	89
Galla, V., Engineer Colonel. "Antinuclear Defense of Objects Ashore"	96
Kozlov, I., Engineer Commander. "Radiation Measurements"	110
Aleksandrov, A., Engineer Captain. "Decontamination on a Ship"	121
Kozlov, I., Engineer Captain. "Protecting Ships Against Atomic Weapons"	128
Koblov, P., Candidate of Technical Sciences, Engineer Lieutenant Colonel. "That is Dangerous in Testing of Nuclear Weapons"	134
Koblov, P., Candidate of Technical Sciences, Engineer Commander. "Microclimatic Conditions on Ships"	147
Kozlov, I., Lieutenant Colonel of Medical Service. "Sanitary Protection on a Ship"	151
Zakusov, A., Doctor, Candidate of Historical Sciences, Captain. "Atomic Weapons and Some Problems of Naval Tactics (According to Data from the Foreign Press)"	158
Kozlov, I., Doctor, Candidate of Technical Sciences, Engineer Sub-Commander. "American Submarines With Atomic Engines (According to Data from the Foreign Press)"	170
Koblov, P., Candidate of Technical Sciences, Engineer Lieutenant Colonel. "Atomic Depth Bomb (According to Data from the Foreign Press)"	194
Kozlov, I., Engineer Rear Admiral. "Atomic Power Plants on Ships"	197
Kozlov, I., Doctor, Candidate of Technical Sciences, Engineer Captain. "Use of Atomic Engines in Ships"	203
Kozlov, I., Corresponding Member of the Academy of Sciences of the USSR. "Soviet Worker in the Field of Science and Technology of the USSR. Atom-Powered Ships"	211
Kozlov, I., Guards Colonel. "Atomic Shipyard of the Future (According to Data from the Foreign Press)"	217
Chernomir, L. D., Engineer Captain. "The World's First Atomic icebreaker, 'Lening'"	223

AVAILABLE: Library of Congress (U7/67.039)

ALEKSANDROV, A.

Protection from radiation. Okhr. truda i sots. strakh. 5 no.7:34-35
Jl '62. (MIRA 15:7)

1. Zaveduyushchiy otdelom okhrany truda Tsentral'nogo komiteta
profsoyuza meditsinskikh rabotnikov.
(RADIOLOGY, MEDICAL—HYGIENIC ASPECTS)

ALEKSANDROV, A.

Apparatus for artificial respiration. Okhr. truda i sets. strakh.
5 no.6:34-35 Je '62. (MIRA 15:7)
(Respiration, Artificial—Equipment and supplies)

ALEKSANDROV, A.

Public-health workers should have additional leave and a shortened working day. Okhr. truda i sots. strakh. 4 no.6:42-43 Je. '61.
(MIRA 14:7)

1. Zaveduyushchiy otделom okhrany truda TSentral'nogo
profsoyuza meditsinskih rabotnikov.
(Hospitals--Staff)
(Hours of work)

ALEKSANDROV, A., kapitan-nastavnik

Some navigational characteristics of the Kazan'-Stavropol' section
of the Kuybyshev Reservoir. Rech. transp. 19 no.3:51-53 Mr '60.
(MIRA 14:5)

(Kubyshev Reservoir---Navigation) ;

ALEKSANDROV, A.,; VASILEVA-ALEKSANDROVA, P.

Photometric determination of bivalent tin with picrolonic acid.
Zhur.anal.khim. 18 no.7:905-906 J1 '63. (MIRA 16:11)

1. Institute of Food and Flavouring Industry, Plovdiv, Bulgaria.

ALEKSANDROV, A.

Balls instead of electron tubes. Izobr. i rats. no.11:20-21 '63.
(MIRA 16:12)

ALEKSANDROV, A., prof.; ZHEVTYAK, P., dotsent; RABINOVICH, G., dotsent;
YASTREBOV, N., dotsent; LAYKOV, A., prepodavatel'

Strengthen the financial service in enterprises: Efficiency is the
important demand. Fin. SSSR 38 no.1:59-62 Ja '64. (MIRA 17:2)

ALEKSANDROV, A.

Advanced experience of the builders of the Volga Hydroelectric
Power Station (22d Congress of the CPSU). Na stroi, Ros. no. 12:
2-5 D '61. (MIRA 16:1)

1. Nachal'nik Volgogradgidrostroya.
(Volga Hydroelectric Power Station (22d Congress of the CPSU))

ALEKSANDROV, A., kand.tekhn.nauk

Determining the effective power of an engine in operating conditions.
Rech. transp. 22 no.7:27 JI '63. (MIRA 16:9)
(Marine engines--Testing)

ALEKSANDROV, A. (Simferopol')

The irreconcilable are on watch. Grazhd. av. 21 no.5:24-25 My '64.
(MIRA 18:4)

ALEKSANDROV, A., inzh.

- Thermotechnical characteristics and the operational control of
marine water-tube steam boilers. Rech.transp.19 no.8:24-26 Ag '60.
(MIRA 14:3)

(Boilers, Marine)

ALEKSANDROV, A.

25

PHASE I BOOK EXPLOITATION

SOV/6261

Kernenergie und Flotte; Artikelsammlung (Nuclear Energy and the Navy; Collection of Articles) [Berlin] Deutscher Militärverlag [1961]. 232 p. Errata slip inserted. 2000 copies printed.

Translation from the Russian of: Atomnaya energiya i flot.

Translator: Erika Steuk, Lieutenant Commander. Responsibility for German edition: Claus Gruszka, Engineer; Ed.: Klaus Krumsieg.

PURPOSE: This collection of articles is intended for officers of the army, coast guard, and merchant marine.

COVERAGE: The book, a translation from the Russian, contains 25 articles dealing with the application of nuclear weapons to naval combat operations. Chapters 19 and 25 have been supplemented with additional data for this edition. The devastating features of nuclear explosions are discussed. Attention is also given to the protection of personnel, ships, and coastal facilities against nuclear weapons, and to the present and future applications of nuclear power plants to shipping. No personalities are mentioned. There are 16 references: 10 Russian (including 3 translations from English-language sources), 1 French, 1 German, 1 English, 1 American, and 2 either English or American.

Nuclear Energy and the Navy (Cont.)

SOV/6261

5. I. Frolov, Engineer Commander (Navy). Primary Penetrating Radiation 58
6. A. Aleksandrov, Engineer Lieutenant Colonel, and O. Kogtey, Major Engineer. The "Foot Wave" and Its Damaging Effect 66
7. I. Frolov. Ionizing Contamination 70
8. P. Abrosimov, Captain (Navy), and V. Vladimirov, Engineer Captain (Navy). Protecting a Ship Against Nuclear Weapons 78
9. G. Migirenko, Captain (Navy), Professor, Doctor of Engineering. Protecting a Ship Against Explosions 86
10. P. Abolishin, Captain (Navy). Means of Protection Against Nuclear Weapons in Foreign Navies 93
11. P. Khokhlov, Engineer Captain (Navy), Candidate of Technical Sciences. Nuclear Protection of Light-Class Ships 100

Card 3/6

2/2

~~ALEKSANDROV, A., inzh.~~

Heat control of internal combustion marine engines during operation.
Rech. transp. 20 no. 3:23-25 Mr '61. (MIRA 14:5)
(Marine engines)

ALEKSANDROV, A., inzh.

Heat engineering control of marine internal combustion engines.

Rech. transp. 21 no.2:29-30 F '62. (MIRA 15:3)

(Marine engines) (Heat engineering)

ALEKSANDROV, A., inzh.

Greater attention to operational and technical indices for steamers
of standardized construction. Rech.transp. 21 no.7:28-29 J1 '62.
(Shipbuilding)

ALEKSANDROV, A., kand.tekhn.nauk

Main motorship engines should operate with nominal indices.
Rech.transp. 22 no.1:25-26 Ja '63. (MIRA 16:2)
(Marine engines—Maintenance and repair)

ALEKSANDROV, A.; VASILEVA-ALEKSANDROVA, P.

Detection of tin in the systematic analysis of cations of the
hydrogen sulfide group. Zhur.anal.khim. 18 no.10:1275-1276
0 '63. (MIRA 16:12)

1. Institute of Food and Flavouring Industry, Plovdiv, Bulgaria.

ALEKSANDROV, A., kand. tekhn. nauk.

Energy efficiency index of cargo and passenger motor ships.
Rech. transp. 23 no.1:32-33 Ja '64. (MIRA 18:11)

ALEKSANDROV, A., kand. tekhn. nauk; KIVAL'KIN, Ye., inzh.

Prevent the overloading of main diesels. Rech. transp. 24 no.8:28-29
'65. (MIRA 18:9)

ALEKSANDROV, Al.

Semaphores in the Rila Mountains. Nauka i tekhnolozhiya 17 no.1:
42-45 Ja '65.

GIRSHFEL'D, V.Ya.; ALEKSANDROV, A.A.

Utilizing heat from bleeder steam superheating in a regenerative preheating system for feed water. Nauch.dokl.vys.shkoly; energ. no.4:141-151 '58. (MIRA 12:5)

1. Rekomendovana kafedroy teplovykh elektrostantsiy Moskovskogo energeticheskogo instituta.
(Feed-water heaters)

ALEKSANDROV, A. A.

PA 243T37

USSR/Engineering - Construction,
Pipe Lines

15 Sep 52

"Mechanical Device for Pipe Rotation," A.A. Aleksnadrov,
Engr, Tsentropsststroy Trust, MNP (Ministry of Petroleum
Industry)

"Byul Stroit Tekh" No 17, pp 26-28

Describes mechanism constructed at drilling machine
plant of Tsentropsststroy for rotating pipes during
welding of long pipe lines. Device is light, and
small, driven by ac motor and permits quick change of
pipe rotation speed, representing improved model in
comparison with existing devices. First lot of new
rotating devices has been sent from plant to construc-
tion projects.

243T37

ALFESANDROV, A.A.

Sealing the water holes in the hydraulic casing of drilling
pumps with AST-T plastic. Mash. i neft. obor. no.8:48 '63.
(MIRA 17:6)

1. "Pervomayburneft".

ALEKSANDROV, A. A.

Refinery-scale reducing experiments. A. A. Aleksan-
drov, A. Z. Dorogochinskiy and G. I. Kaz'min. *Grazen-
skii Neftyanik* 6, No. 3, 42-9 (1966). An increase in the
temp. in the small Winkler-Koch type furnace to 400°
yields 5-7% pressure distillate, although the reducing
effect is minimized in the evaporator, leading finally to a
lower yield of pressure distillate in the large furnace in
once-through cracking. According to refinery scale expts.
the most rational reducing method increases the total
yield of pressure distillate by 2%. It is recommended to
carry out the reducing in the furnace at 400° for 2-3 min.
and in the evaporator at 420° for 40-60 min. The in-
crease of kerosene fractions in the condensate during
reducing requires withdrawal of these fractions through
the evapn. tower and cracking under more severe condi-
tions (higher temp. and pressure). Fourteen references.

A. A. Hochthling

ASB, 33.4. METALLURGICAL LITERATURE CLASSIFICATION

ALEKSANDROV, A. A.										PROCESSING AND PROPERTIES INDEX									
15										12									
<p>Efficient Method of Removing Scale from Under Blooming Mills. A. Alexandrov. (Stal, 1936, No. 8, pp. 56-63). The author describes the "dry" and "wet" methods of scale removal from under rolling mills. He emphasises the advantages of the hydraulic method. (In Russian).</p>																			
ASB-11A METALLURGICAL LITERATURE CLASSIFICATION																			
SECTION DIVISION										SECTION DIVISION									
SECTION DIVISION										SECTION DIVISION									

ALEXANDROV, A. A.

Plumingi i slabingi: pod red. A.I. TSelikova,
Moskva, Metallurgizdat, 1949. 247 p. illus.

Bibliography: p. 245-247.

DLC: TS3h0.A48

Rolling Mills and slabbing mills.

SO: Manufacturing and Mechanical Engineering in the Soviet Union,
Library of Congress, 1953.

ALEKSANDROV, A.A.; KOCHETKOV, A.V.

Using metal cores. Lit.proizv. no.5:32 Ag '54. (MLRA 7:8)
(Founding)

Aleksandrov, A. A.

137-1957-12-23666

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 12, p 118 (USSR)

AUTHOR: Aleksandrov, A. A.

TITLE: Multi-Stand Blooming Mills (Mnogoklet'yevyye blyumingi)

PERIODICAL: Tr. Nauchno-tekhn. o-va chernoy metallurgii. Ukr. resp. pravl., 1956, Vol 1, pp 44 - 57

ABSTRACT: The productivity of shape- and sheet-rolling mills (M) considerably exceeds the capabilities of duo-reversible blooming mills (B). Therefore, there are now plants which introduce double B's arranged either in series or in parallel to one another. On existing B's additional stands (S) are being installed, for example, at the MMK plant. Common to duo-reversible B's is the rolling (R) with small reduction, R with unrestricted widening, R with alternating forward movement of the head and rear end of the billet, and R with great inaccuracy of cross section. All of this greatly influences the quality of the blooms and slabs as well as the consumption of metal. The multi-stand B's, which as a rule have as many stands as there are passes, permit large drawings in the rhombus-square design system, which, on the average, attain a magnitude of 1.30.

Card 1/3

Multi-Stand Blooming Mills

137-1957-12-23666

The R is carried out with restricted widening. Different versions of multi-stand B's are proposed for the R of billets weighing 5, 7.5 to 9 and 10.5 tons. In the R of 7.5-ton billets the mill consists of 8 S's arranged in series. The first two S's have rolls rotating in a single sense, deeply cut-in rectangular calibers, and a nominal roll diameter of 1350 mm. After that, the R may be carried out either by the rhombus-square system, or in rectangular grooves, or in stands consisting of two horizontal rolls with shallow-cut grooves and two vertical rolls. With such design the rolling process may be carried out almost without widening, and a large number of intermediate sections may be obtained for use in the final production stand. The velocities of R in the last S, which turns out 250 x 250 mm blooms, are coordinated with the velocities of the continuous-billet mills installed following this B, and thus ensure a positive grip of the metal by the rolls. The velocity used in the last stand (1 m/sec) is more than twice as great as the rolling velocity on existing continuous-billet mills, thus making it possible for one multi-stand mill to supply two continuous-billet mills. The output of such a B is appx. 6.5 million tons per year.

Card 2/3

137-1957-12-23666

Multi-Stand Blooming Mills

The construction of such an S is considerably simpler than that of duo-reversible B's: there is no need for complex pressure mechanisms, broad conveyors, heavy working rolls, cumbersome S's, spindles, etc.; the electrical part is also considerably simplified by the installation of synchronous motors without costly Il'gner aggregates, etc. The R speed on this stand is such that the blanks should be fed in every 20 - 30 sec.

B. Ye.

1. Blooming mills-Operation
2. Rolling mills-Modernization
3. Rolling mills-Characteristics

Card 3/3

Aleksandrov, A.A.

137-1957-12-23641

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 12, p 114 (USSR)

AUTHOR: Aleksandrov, A. A.

TITLE: The Rate of Rolling Speeds in Duo-reversible Blooming Mills
(Rezhim skorostey prokatki na duo-reversivnykh blyumingakh)

PERIODICAL: Tr. nauchno-tekhn. o-va chernoy metallurgii. Ukr. resp.
pravl., 1956, 1, pp 73-85

ABSTRACT: Investigations of the rates of speeds in duo-reversible blooming mills (B) were performed by oscillographic methods by the Khar'kov Engineering-Economic Institute together with the TsNIIT Mash and the Makeyevskiy and the "Azovstal'" plants. For the Makeyevskiy B 1150 a number of graphs were plotted showing the speed variation during rolling of 160x200 mm, 200x200 mm and 240x240 mm blooms of bubbling steel, 240x240 mm of bubble-free steel and 130x300 mm slabs of bubble-free steel SKhL-1. From the "Azovstal'" plant's B1170 oscillograms were taken on the basic 250x300 mm rail-blooms, 205x220 mm, 205x245 mm, and 280x300 mm blooms of bubbling steel, as well as on various compositions of bubble-free steel of 190x200 mm, 270x280 mm and 330x335 mm.

Card 1/2

137-1957-12-23641

The Rate of Rolling Speeds in Duo-reversible (cont.)

For a fuller analysis of the rates of speed employed at both of these B's, the operation of the leading B's of the Magnitogorsk and the Kuznetskiy combines were studied. The rotational speed (S) employed in the B of the KMK is lower than that used in the B of the MMK. Thus, for example, at the initial grip, the S in the former was 19.2 rpm, while in the latter 21-45 rpm were observed. In the Makeyevskiy B the S at the initial grip of analogous blooms was 0 - 65 rpm. In the "Azovstal'" B 1170 the S at the initial grip is higher than in the case of the B of the KMK, and 75 rpm are attained by the rolls during the 2d pass and 60-75 rpm during the 11th - 14th passes. The S during ejection is also considerably higher: 24.0-55.6 rpm were observed in rolling of rail-blooms in the B of the KMK, while 29.8-95.5 rpm were recorded for the B 1170. It is shown that a further increase in rolling reduction is possible for both B's. Investigations also pointed out the desirability of increasing the diameters of the rolls of the B 1150 and B 1170 by approx. 100 mm, and the diameters of their journals by 60-70 mm, because on the driven end the journal is subjected to stresses which are close to the yield point. The action of the motor should be automated to produce automatic braking after the metal has left the rolls, to be followed by the reversal.

D. Ye.

Card 2/2

1. Blooming mills-Rolling speeds-Determination

ALEKSANDROV, A. A., Prof.; MEYEROVICH, I. M., ROKOTYAN, Ye. S., Candidates of Tech. Sci.;
SAKHAROV, A. I., Docent; STUKALOV, M. I., Engr.; YASHCHENKO, V. A., Engr.;
DOLMATOV, F. M., Engr.;

"Investigation of Power and Strength Characteristics of Blooming Mills to
Obtain Maximum Output Capacity," Rolling Mills; Studies, Calculation, De-
sign and Operation, No. 8, Moscow, Mashgiz, 1956. 258 p.

Articles by Rokotyan, Ye. S., Meyerovich, I. M., and others describe results
of experiments conducted on blooming, cold-rolling, duralumin-dressing, and
car wheel rolling mills.

ALEKSANDROV, A.A.

ROKOTYAN, Ye.S., kandidat tekhnicheskikh nauk; MEYEROVICH, I.M., kandidat tekhnicheskikh nauk; ALEKSANDROV, A.A., profesor; SAKHAROV, A.I., dotsent; STUKALOV, M.I., inzhener; YASHCHENKO, V.A., inzhener; DOLMATOV, F.M., inzhener.

Improving the performance of blooming mills by determining potentialities in factors of strength and power of the equipment.

[Trudy] TSNITMASH no.83:134-147 '56.

(MLRA 10:9)

(Rolling mills) (Mechanics)

ALEKSANDROV, A.A. (Izhevsk)

First open-hearth furnace at the Izhevsk plant. Vop.ist.est.1
tekhn. no.9:154-157 '60. (MIRA 13:?)
(Izhevsk--Open-hearth furnaces)

ALEKSANDROV, A.A., prof.

Ways of improving blooming and slabbing mills. Metallurg 5
no.9:29-32 S '60. (MIRA 13:8)

1. Khar'kovskiy inzhenerno-ekonomicheskij institut.
(Rolling mills)

ALEKSANDROV, A.A.

Calculating the pressure of metal being rolled on blooming mill
rolls. Izv. vys. ucheb. zav.; chern. met. no.8:68-80 '60.
(MIRA 13:9)

1. Khar'kovskiy inzhenerno-ekonomicheskii institut.
(Rolling (Metalwork))

ALEKSANDROV, A.A.

Blooming mills for new metallurgical plants. Izv. vys. ucheb. zav.;
chern. met. 4 no.12:92-99 '61. (MIRA 15:1)

1. Khar'kovskiy inzhenerno-ekonomicheskii institut.
(Rolling mills)

ALEKSANDROV, A.A.; GAVRILOV, V.Yu.; KISELEV, A.G.; LAZURKIN, Yu.S.;
MOKUL'SKIY, M.A.

Origin of broad electron paramagnetic resonance lines in nucleic
acids and their complexes with proteins. Dokl. AN SSSR 141 no.6:
1483-1485 D '61. (MIRA 14:12)

1. Predstavleno akademikom A.P.Aleksandrovym.
(Paramagnetic resonance and relaxation) (Nucleic acids)
(Ferromagnetism)

MINENKO, V.A.; ALEKSANDROV, A.A.; SVETS, V.Ye.; BORZENKO, V.P.; KURILOV,
P.G.; KHAZANOVICH, N.L.; Primali uchastiye: POPOV, A.I.;
KONOVALOV, A.N.; TERTYCHNAYA, I.Yu.; POSHKREBNEV, V.P.;
DMITRIYEVA, S.M.; KORNILOVA, A.V.

Work organization in the section, of metal feed to blooming
mills. Met. i gornorud. prom. no.2:67-68 Mr-Ap '64.
(MIRA 17:9)

SMIRNOV, V.S.; ALEKSANDROV, A.A.; SHIBANOV, L.A.

Equipment for metal rolling in vacuum or an inert gas atmosphere.
Trudy LPI no.238:81-89 '64. (MIRA 17:11)

SMIRNOV, V.S.; TRON', A.S.; ALEKSANDROV, A.A.; VITORSKIY, Ya.M.; REBAL'CHENKO,
N.D.

Effect of vacuum rolling on the structure and gas content of
titanium and molybdenum. Trudy LPI no.238:90-94 '64.

(MIRA 17:11)

SMIRNOV, V.S.; ALEKSANDROV, A.A.; TRON', A.S.

Using vacuum or an inert atmosphere during metalworking by
pressure. Trudy LPI no.238:101-103 '64. (MIRA 17:11)

ALEKSANDROV, A.A., inzh.

Airtight equipment with mixers. Khim. i neft. mashinostr. no.1:38-
39 Ja '65. (MIRA 18:3)

L 08340-67 EWT(m)/EWP(v)/EWP(t)/ETI/EWP(k) IJP(c) JD/HW/HW/JG

ACC NR: AR6033105 SOURCE CODE: UR/0137/66/000/007/D009/D010

AUTHOR: Smirnov, V. S.; Tron', A. S.; Aleksandrov, A. A.;
Rybal'chenko, N. D. 4/

TITLE: Producing bimetals by hot rolling in vacuum

SOURCE: Ref. zh. Metallurgiya, Abs. 7D70

REF SOURCE: Tr. Leningr. politekhn. in-ta, no. 260, 1965, 22-27

TOPIC TAGS: bimetal, hot rolling, plastic deformation, bimetal welding

ABSTRACT: The results are presented of an investigation of the effect of reduction values, the ratio of thicknesses in a packet, and the purity of treatment of welding surfaces on the weld strength of Me during plastic deformation in vacuum. The results of metallographic examination of the transition zone are also given. The investigations were carried out on pairs of Me: steel 3—Cu, steel 3—Ti, steel 3—1Kh18N9T, Mo—Ni, and Mo—Cu. To ensure strong welds deformation of 5--10% is sufficient. With increased reduction of the packet, the weld strength grows. In changing the ratio of thickness of layers of individual Me in a bimetal packet, the weld strength decreases with increased thickness of the layer of more plastic Me. At the boundary of Me contact in a bimetal, obtained

Card 1/2

UDC: 621.771.014.2

L 08340-67

ACC NR: AR6033105

by hot rolling in vacuum, a transition zone is produced as a result of diffusional processes. The thickness of the zone depends on the temperature of rolling, the value of reduction of the packet, the purity of mechanical treatment of welded surfaces, and on the subsequent metal heat treating. N. Yudina. [Translation of abstract]

SUB CODE: 13/

Card 2/2 net

L 07463-67 EWT(d)/EWT(m)/EWP(c)/EWP(k)/EWP(v)/EWP(t)/EWP(l)/ETI IJP(c) JH/JD/IM/

ACC NR: AP6035652 HW

SOURCE CODE: UR/0133/66/000/011/1014/1015

AUTHOR: Smirnov, V. S.; Danilevskiy, O. F.; Aleksandrov, A. A.; Stol'nyy, V. I.; Kagan, E. S. 49 B

ORG: none

TITLE: Manufacture of clad plates by rolling evacuated packs

SOURCE: Stal', no. 11, 1966, 1014-1015

TOPIC TAGS: metal cladding, clad plate, titanium, ~~clad steel plate~~ steel 27

ABSTRACT: A method of cladding of steel plates (45 x 1300 x 3500 mm) with titanium with a magnesium oxide interlayer has been developed. Cladding was done by rolling a pack composed of an St.3 steel slab, a VT-1 titanium cladding plate, and a magnesium oxide interlayer. To prevent oxidation of the titanium, the edges of the pack were sealed by welding and all the air was evacuated from the inside of the pack. The pack, preheated to 1050C, was rolled to the desired thickness. The surface of the cladding plate was found to be smooth and even. Ultrasonic inspection did not reveal any lamination between the titanium and steel. Introduction of this method in the industry would help in production of clad plates of good quality and eliminate the need of vacuum rolling mills. Orig. art. has: 1 figure. 14

bimetal 18

SUB CODE: 13, 14/ SUBM DATE: none/ ORIG REF: 007/ ATD PRESS: 5104

Card 1/1 gd

UDC: 621.771.8

ACC NR: AT7003263 (N) SOURCE CODE: UR/2563/66/000/263/0042/0047

AUTHOR: Aleksandrov, A. A.; Tron', A. S.; Rybal'chenko, N. D.

ORG: none

TITLE: Production of nickel-copper composite material by vacuum rolling

SOURCE: Leningrad. Politekhnikheskiy institut. Trudy, no. 263, 1966. Mashiny i tekhnologiya obrabotki metallov davleniyem (Machinery and technology of metal working by pressure), 42-47

TOPIC TAGS: composite material, nickel copper composite material, composite material rolling, vacuum pack rolling, composite material bond strength, composite material rolling technology.

ABSTRACT: M-1 grade copper and 99.99%-pure nickel sheets, 10 mm thick, vacuum annealed at 700 and 900C, respectively, were slowly cooled, assembled into 20 x 40 x 100 mm packets, pack rolled in a vacuum of up to $1 \cdot 10^{-5}$ mm Hg at 750-1050C with a 5-52% reduction, and investigated to determine the effect of the rolling temperature, depth of vacuum, and degree of reduction on the bond strength and microstructure. The highest bond strength, 24-25.5 Kg/mm², was observed in

Card 1/2

ACC NR: AT7003263

composite sheets rolled with a 30% reduction in a vacuum of $1 \cdot 10^{-4}$ mm Hg at 1050—950C and a packed width-to-height ratio of 1:2. The surface finish of the joined sheets had no effect on the bond strength of the composite metal. The bond strength was also practically unaffected by annealing at 400—600C, but slightly decreased to 22—23 Kg/mm² with annealing at 800—1000C. The metal near the interface had a finer grain structure than the base metal. No transition zone was observed at the interface of composite specimens in the as-rolled condition, but the specimens annealed at 900C for 24 hr had a 25—40 μ thick intermediate layer, probably of a solid solution of copper in nickel. This indicated that the diffusion of copper into nickel was a predominant process in the rolling and annealing of composite metal. Further experiments showed that composite parts can be obtained by one-pass hot rolling of composite blanks in vacuum followed by rolling the blanks into finished parts in the air. The copper-nickel and nickel-copper composite metal, pack rolled at 950C in a vacuum of $2 \cdot 10^{-5}$ mm Hg with a 15—25% reduction per pass and subsequently rolled in the air at room temperature, had a bond strength of 22—24 Kg/mm². The nickel-copper-nickel and nickel-copper foils, 0.2—0.4 mm thick, satisfied all requirements for metal composites used in the radioelectronic industry. Orig. art. has: 4 figures.

SUB CODE: 13, 11/ SUBM DATE: none/ ORIG REF: 011

Card 2/2

ALEKSANDROV, A. A.

"Scientific and Technical Conference of Research Organization of the Main
Electrical Assembly Plant of the Ministry of Construction of Heavy Industry Enterprises,"
Byul. stroi. tekhn., 9, No.16, 1952

ALEKSANDROV, A.A.; NAYFEL'D, M.R.; SOKOLOV, B.A., redaktor

[Terminal splitting of control cables by S.V.TSyganov's method]
Razdelka kontrol'nykh kabelei po metodu S.V.TSyganova. [Nauch.
redaktor B.A.Sokolov] Moskva, Gos. izd-vo lit-ry po stroitel'stvu
i arkhitekture, 1953. 13 p. (MLRA 7:5)
(Electric cables)

ALEKSANDROV, A.A.

[Stakhanovite methods in preparation and installation of steel conduits in electric installation work] Stakhanovskie metody zagotovki i montazha stal'nykh trub pri proizvodstve elektromontazhnykh rabot. Moskva, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1953. 21 p. (MIRA 6:10)
(Electric conduits)

1. ALEKSANDROV, A. A. Eng.
2. USSR (600)
4. Electric Engineering
7. Post-operational rationalization of installation work. Shor. mat. o nov. tekhn. v stroi. 15 No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

ALEXANDROV, A.A., inshener.

Key for tying wire. Sbor.mat.o nov.tekh.v stroi. 15 no.9:20-21 '53.

(MIRA 6:10)

(Wire)

ALEKSANDROV, A.A.; BATMANOV, Ye.S.

Using dowels for fixing installation details of electric wiring.
[Suggested by A.A.Aleksandrov, Ye.S.Batmanov]. Rats. i izobr. predl.
v stroi. no.145:3-5 . '56. (MLRA 10:3)
(Electric wiring)

ALEKSANDROV, A.A.

Fixing installation details on gypsum plaster board. [Suggested by .
A.A.Aleksandrov]. Rats. 1 izobr. predl. v stroi. no. 145:6-8 '56.
(MLRA 10:3)

(Electric wiring) (Plaster board)

ALEKSANDROV, A.A.; SAVIN, M.A.; PEREL'MAN, Ya.V.

"Protective grounding in electric installations" by
M.R. Naifel'd. Reviewed by A.A. Aleksandrov, M.A. Savin,
I.A.V. Perel'man. Prom.energ. 12 no.1:36-37 Ja '57. (MLRA 10:2)

1. Glavnyy energetik zavoda "Elektrosila" (for Aleksandrov)
2. Inspektor Energoinspektsii Energoabyta Leningradskoy
elektroenergeticheskoy sistemy (for Savin) 3. Chlen
Vsesoyuznogo nauchnogo inzhenerno-tekhnicheskogo obshchestva
energetikov (LONTOP) (for Perel'man).
(Electric currents--Grounding)

Aleksandrov, A.A.

AUTHORS: Aleksandrov, A.A. and Ustinov, A.P.

94-1-16/24

TITLE: A Roller-type Current Rectifier (Rolikovyy vypryamitel' toka)

PERIODICAL: Promyshlennaya Energetika, 1958, No.1,
pp. 33 - 34 (USSR)

ABSTRACT: This brief article describes mechanical rectifiers developed by the German firm Kalor-Emag in which the contact system includes rollers. The equipment is suitable for production of medium-voltage d.c., and can be paralleled with mercury-arc rectifiers. The operating principle is described and illustrated with reference to Fig.1. There are two stationary sectionalised contact rings which are bridged as required by moving rollers. Equipment for 4 000 A d.c. has 6 pairs of contact segments. Equipment for 12 000 A is illustrated in Fig.2. The firm of Kalor-Emag manufactures two types of rectifier, one vertical, as illustrated in Fig.3, and the other a double horizontal arrangement, illustrated in Fig.4. The main characteristics of the equipment are tabulated. There are 4 figures.

AVAILABLE: Library of Congress

Card 1/1

KERTSELLI, L.I.; RYZHKIN, V.Ya.; ALEKSANDROV, A.A.

Investigation of thermal efficiency of electric power plants
equipped with high capacity turbine installations of high and
superhigh steam parameters. Nauch.dokl.vys.shkoly; energ.
no.3:109-120 '58. (MIRA 12:1)

1. Rekomendovano kafedroy teplovykh elektricheskikh stantsiy
Moskovskogo energeticheskogo instituta.
(Electric power plants)

SOV/96-59-10-14/22

AUTHORS: Vukalovich, M.P. (Dr.Tech.Sci.); Zubarev, V.N. (Cand. Tech.Sci.); Aleksandrov, A.A. (Engineer) and Kalinin, Yu.Ya. (Engineer)

TITLE: An Experimental Determination of the Specific Volumes of Water up to Pressures of 1200 kg/cm²

PERIODICAL: Teploenergetika, 1959, Nr 10, pp 74-77 (USSR)

ABSTRACT: Available information about the thermodynamic properties of water at high pressures is inadequate and experimental data on the specific volume of water were required. The data are needed both to formulate tables of specific volume, and also to calculate calorific values of the specific heat at constant pressure and of the enthalpy of water at high pressures. Similar work is in hand in the U.S.A. by Kennedy, Knight and Holser. The equipment used was very similar to that described by Kirillin in Teploenergetika Nr 11, 1935. The piezometer was made of steel 1Kh18N9T, whose thermal coefficient of expansion is tabulated. Precautions taken to ensure accuracy of the experiments are described in considerable detail. Specific volumes of water were determined at six temperatures, and the experimental data are tabulated.

Card 1/2

SOV/96-59-10-14/22

An Experimental Determination of the Specific Volumes of Water
up to Pressures of 1200 kg/cm²

The maximum error of the test data calculated in the usual way is 0.06-0.08%, the latter figure relating to the maximum test temperature. The experimental data obtained in this work are compared with published American and Soviet data at each of the six temperatures. Agreement between the present work and published American work is good; such differences as there are lie within the total experimental error of the two sets of data. At low temperatures there is good agreement with the published Soviet data, but differences become appreciable at higher temperatures. This is evidently because values of specific volume at high pressure previously published were obtained by extrapolation of experimental data obtained at a pressure of 300 kg/cm². The previously published Soviet data of Vukalovich appear to be in need of correction. There are 2 tables, 1 figure and 8 refs, (5 Soviet, 3 English).

Card
2/2

ASSOCIATION: Moscow Power Institute
(Moskovskiy energeticheskiy institut)

ALEKSANDROV A.A.

Special features of the operation of electrical installations
in the Arctic. Prom.energ. 15 no.2:1-6 F '60.

(MIRA 13:5)

(Electric power plants--Cold weather operation)

VUKALOVICH, M.P., doktor tekhn.nauk; ZUBAREV, V.N., kand.tekhn.nauk;
KALININ, Yu.Ya., inzh.; ALEKSANDROV, A.A., inzh.

Equation of state of water based on experimental data.
Teploenergetika 8 no.4:76-81 Ap '61. (MIRA 14:8)

1. Moskovskiy energeticheskiy institut.
(Water--Thermal properties)
(Equation of state)

VUKALOVICH M.P., ~~do~~ doktor tekhn.nauk, prof.; ZUBAREV, V.N., kand.tekhn.nauk;
ALEKSANDROV, A.A., inzh.

Experimental determining of the specific volumes of steam at
temperatures from 700° to 900° C and under a pressure up to
1200 Kilogram per square centimeter. Teploenergetika 9
no.1:49-51 Ja '62. (MIRA 14:12)

1. Moskovskiy energeticheskiy institut.
(Steam)

ZUBAREV, V. N., kand. tekhn. nauk; ALEKSANDROV, A. A., kand. tekhn.
nauk

Heat transmission and viscosity of a 96-per cent (in volume)
solution of ethyl alcohol in water. Teploenergetika 10 no.3:
74-78 Mr '63. (MIRA 16-4)

1. Moskovskiy energeticheskiy institut.

(Ethyl alcohol--Thermal properties)

ALEKSANDROV, A.A.

Using waste waters to eliminate freezing of the drilling tool.
Burenie no.9:18 '64. (MIRA 18:5)

1. Test "Pervomayburneft".

L 35023-65 EAT(m)/EPF(n)-2/EWA(d)/ENP(t)/EWP(k)/EWP(b)/EWA(c) Pf-L/Pu-L

LJP(c) JD/HW/JG

ACCESSION NR: AT4047713

S/2563/64/000/238/0091/0089

4/2+1

AUTHOR: Smirnov, V. S. (Professor, Corresponding member AN SSSR); Aleksandrov, A. A.; Shibanov, L. A.

TITLE: Installation for the rolling of metals under vacuum or in inert atmosphere

SOURCE: Leningrad. Politeknicheskii institut. Trudy*, no. 238, 1964.
Obrabotka metallov davleniyem (Metalworking by pressure), 81-89

TOPIC TAGS: vacuum deformation, inert atmosphere, molybdenum, titanium,
diffusion pump system

ABSTRACT: The authors discuss Soviet and foreign installations which make it possible to carry out hot plastic deformation under vacuum or in inert atmospheres. Fiziko-tehnicheskii institut AN USSR (Physico-Technical Institute, Academy of Sciences Ukr. SSR) built an experimental installation in 1953 but its productivity was very low. LPI im. M. I. Kalinin (Leningrad Polytechnic Institute im. M. I. Kalinin) improved the design by incorporating a system of diffusion pumping and using a pump before the vacuum chambers. A number of shortcomings

Card 1/2

L 35023-65

ACCESSION NF: AT4047713

still remain to be eliminated but the experimental rolling of Mo and Ti alloy specimens corroborates the possibility of utilizing the installation for the study of metal rolling under vacuum and its effect on the structure and properties of metals. Orig. art. has: 8 figures.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NR REF SOV: 005

OTHER: 002

Card 2/2

L 35022-65 EWT(m)/EPT(n)-2/EWA(d)/T/EWP(t)/EWP(k)/EWP(b)/EWA(c) Pf-4/Pu-4
 IJP(c) JD/HW/JG
 ACCESSION NR: AT4047714 S/2563/64/000/238/0090/0094 44
 1/2
 B

AUTHOR: Smirnov, V. S. (Professor, Corresponding member AN SSSR); Tron', A. S.;
Aleksandrov, A. A.; Vitorskiy, Ya. M.; Rybal'chenko, N. D.

TITLE: The effect of vacuum rolling on the structure and gas impregnation of titanium and molybdenum

SOURCE: Leningrad. Politekhnikheskiy institut. Trudy*, no. 238, 1964.
Obrabotka metallov davleniyem (Metalworking by pressure), 90-94

TOPIC TAGS: ²¹ titanium, ²¹ molybdenum, vacuum deformation, structure, gas impregnation

ABSTRACT: The effect of rolling under vacuum on structure, contents and distribution of gases during heating was observed in 20x35x120 mm Ti specimens (with 4% Al) and 25x50x90 mm cast Mo specimens. Metallographic examination showed that Ti specimens absorbed gases primarily during heating and not during rolling. The structure of vacuum rolled Ti specimens was more homogeneous and coarse-grained. After vacuum annealing at 1200C and air rolling, the gas impregnated layer in Ti specimens greatly exceeded the thickness of the 0.03 to

Card 1/2

L 35022-65

ACCESSION NR: AT4047714

0.05 mm surface layer of Mo specimens. Vacuum rolled specimens displayed no such layer. During subsequent rolling gas-impregnated surface layers are readily ruptured and cracks propagated. Orig. art. has: 6 figures and 3 tables.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NR REF SOV: 004

OTHER: 000

Card 2/2

7 24309-65 ENT(m)/EPF(n)-2/ENG(h)/EWA(d)/EPR/EPW(t)/EPW(k)/EPW(b)/EWA(h)
 PE-4/PS-4/Pu-4 IJP(c) JD/HN/JG

ACCESSION NR: AT4047716

S/2563/64/000/238/0101/0103

AUTHOR: Smirnov, V. S. (Professor, Corresponding member AN SSSR) Aleksandrov,
 A. A. ; Tron', A. S.

TITLE: Using vacuum or inert media in metalworking by pressure

SOURCE: Leningrad. Politekhicheskii institut. Trudy*, no. 238, 1964. Obra-
 botka metallov davleniyem (Metalworking by pressure), 101-103

TOPIC TAGS: pressure metalworking, refractory metal, vacuum, hot de-
 formation, molybdenum, titanium, niobium

ABSTRACT: In recent years, equipment has been developed for metalworking
 refractory and chemically active metals by pressure. The authors discuss for-
 eign equipment and methods and point out the difficulties involved in operating the
 mechanisms and machinery necessary for metalworking by pressure under va-
 cuum or in an inert gas medium. They emphasize the adverse effect of active
 gases on the properties of Mo, Ti and Nb during heating and hot plastic deforma-
 tion and contend that gases are absorbed by the surface layers of these metals,

Card 1/2

L 36309-65

ACCESSION NR: AT4047715

primarily, during the heating process. It is, therefore, suggested that the removal of the gas-saturated surface layer by method of pickling, electropolishing or mechanical working and by shortening the heating time, improves properties without the employment of vacuum treatment or inert gases during heating and hot deformation. However, the economic effectiveness of the recommendation remains to be verified on an industrial scale. Further study of the effect of vacuum treatment and of inert gases on structure and properties as well as the investigation of installation design and friction that occurs during hot deformation are recommended.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NR REF SOV: 010

OTHER: 008

Card 2/2 50

L 31367-65 EPR/EPF(n)-2/ENT(m)/ENP(k)/ENP(b)/ENA(u)/ENP(t) Pf-4/
Ps-4/Pu-4 IJP(c) JD/HW/JG

ACCESSION NR: AT4047715

S/2563/64/000/238/0095/0100

AUTHOR: Smirnov, V. S. (Professor, Corresponding member AN SSSR); Amonenko, V. M.;
Tron', A. S.; Aleksandrov, A. A.

TITLE: Effect of rolling in a vacuum on metal properties

SOURCE: Leningrad. Politekhnikheskiy institut. Trudy no. 238, 1964. Obratotka
metallov davleniyem (Metalworking by pressure), 95-100

TOPIC TAGS: vacuum rolling, metal rolling, metal vacuum rolling, titanium,
molybdenum, niobium, chromium, tantalum, vanadium

ABSTRACT: Highly purified refractory metals such as molybdenum, tungsten, niobium,
chromium, tantalum, vanadium and their alloys are widely used in the development
of new fields of engineering. All of these metals and alloys are generally pre-
pared in a vacuum, since heat treatment of these metals in air leads to their
contamination. Frequently, plating is used prior to rolling for protection of the
metal. However, removal of the plating after rolling is very difficult. Heating
and deformation of active metals in a vacuum has several advantages in comparison
with treatment in an inert gas. The present paper briefly discusses the results
of investigations into the effect of hot rolling in a vacuum on the mechanical

Cord

L 31367-65

ACCESSION NR: AT4047715

properties and structure of several metals. The metals were deformed on a 170 rolling mill in a vacuum, but the auxiliary mechanisms and bearings were not in a vacuum. The metal was heated to 1500-1700C at a rolling rate of 0.1-1.0 m/sec with cooling of billets up to 800 mm in length in a vacuum of 10^{-1} to 2×10^{-5} mm Hg or in a protective gas. The rolling mill and stand used for the tests is illustrated and described in detail. The tests indicated that the ultimate strength of titanium rolled in a vacuum is lowered by about 3-5% in comparison with titanium rolled in air. The relative elongation increased by 60-80%. Heating and rolling in a 2×10^{-5} mm Hg vacuum increases the plastic properties by 10-20% in comparison with rolling in a 10^{-3} mm Hg vacuum. Heating in a vacuum and rolling in air lead to an increase in the plastic properties of titanium by 15-20%. Niobium heated and rolled in a vacuum has plastic properties 60-80% higher than those of metal rolled in air. The ultimate strength is lowered in this case by about 15-20%. Heating and rolling of molybdenum in a vacuum also leads to an increase in plastic properties by 60-90% and to a lowering in ultimate strength by 10%. The deformability of metals increases by 35-70% when heated and rolled in a vacuum. The plastic properties of the metals improve noticeably at residual pressures of 10^{-3} mm Hg. Changing of the vacuum from 10^{-3} to 2×10^{-5} mm Hg improves the plastic properties of the metals by an additional 15-20%. Hot rolling of metals in a vacuum not only protects them from contamination but also purifies them to some

Card 2/3

L 31367-65

ACCESSION NR: AT4047715

extent. Orig. art. has: 2 figures and 3 tables.

ASSOCIATION: Leningradskiy politekhnicheskii institut imeni M. I. Kalinina
(Leningrad polytechnical institute)

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NO REF SOV: 005

OTHER: 004

Card 3/3

ZUBAREV, Vladimir Nikolayevich; ALEKSANDROV, Aleksey Aleksandrovich;
MELEYEV, A.S., red.; VUKALOVICH, M.F., red.

[Practical work in engineering thermodynamics] Praktikum po
tekhnicheskoi termodinamike. Moskva, Energiia, 1965. 295 p.
(MIRA 18:5)

VUKALOVICH, M.P., doktor tekhn.nauk, prof.; ZUBAREV, V.N., kand.tekhn.nauk;
PRUSAKOV, P.G., kand.tekhn.nauk; ALEKSANDROV, A.A., kand.tekhn.nauk

The is -diagram of steam at 800-1500°C temperatures and pressures up
to 1000 bar. Teploenergetika 12 no.10:88-89 0 '65.

(MIRA 18:10)

1. Moskovskiy energeticheskiy institut.

ALEKSANDROV, A. A.		26	
<p>Varnish for rubber footwear. A. A. Aleksandrov, P. I. Nazarov, A. V. Panova, N. L. Bikel'mant and N. P. Protopopov. Russ. 50,121, Nov. 30, 1939. A mixt. of oxidized or polymerized fat or oil with tar and S dissolved in turpentine, white spirit or other solvents (S 10-25% of the wt. of oil or fat) is boiled down to a varnish.</p>			
<p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>			
<p>CLASSIFICATION</p>			

ALEKSANDROV, A.A.

~~MAKING GLOVES FROM SHEEPSKIN~~
Making glove velour from sheepskin. Leg.prom. 14 no.7:33-34 J1 '54.
(Gloves) (MIRA 7:7)